

FINAL EXAMINATION
GROUP IV
(SYLLABUS 2008)
SUGGESTED ANSWERS TO QUESTIONS
JUNE 2011

PAPER-15: MANAGEMENT ACCOUNTING-
ENTERPRISE PERFORMANCE MANAGEMENT

Answer Question No.1, which is compulsory and any five from the rest.

Qn.1. (a). Out of the different options given against each of the following statements, only one is the most appropriate option. You are required to write it down:

(i) Which of the following parameters are covered in Balanced Score Card?

- a. Customers' Perspective;
- b. Financial Perspective;
- c. Suppliers' Perspective;

Options:

- A. (a) and (b);
- B. (b) and (c);
- C. (a) and (c);
- D. (a), (b) and (c);

(ii) In a TQM environment, external benchmarking is preferred to standard costing as a performance measurement technique because:

Options:

- A. Standard Costs is applicable in a traditional mass-production industry.
- B. TQM refers to a pre-determined internal standard and emphasizes continuous improvement.
- C. Concept of Standard Costing is alien to the emphasis given on employee-empowerment in TQM.
- D. Standard Costs become obsolete quickly.

(iii) The idea of value chain was first suggested:

Options:

- A. Michael Porter;
- B. Joseph Juran;
- C. Goldratt and Core;
- D. John Shank.

(iv) Baysein decision method is used for:

Options:

- A. Make or buy decision;
- B. To take care of uncertainty involved in introducing a new product;
- C. To determine the demand of a product;
- D. Product modification strategies.

(v). The concept of Target Costing originated in:

Options:

- A. USA;
- B. UK;
- C. Japan;
- D. Germany.

1x5

Answer to Qn.1(a):

- i.- D-(a),(b)&(c)- Customers' Perspective, Financial Perspective&. Suppliers' Perspective
- ii.- B- TQM refers to a pre-determined internal standard and emphasizes continuous improvement
- iii.- A- Michael Porter
- iv.- B- To take care of uncertainty involved in introducing a new product
- v.- C-Japan

Qn.no-1(b): State if each of the following statements is True or False:

- i. The term 'value' has four different meanings-exchange value, cost value, use value and wealth value.
- ii. The phrases-right first time or zero defects —were promoted by the Japanese Quality expert Kaoru Ishikawa.
- iii. The Balance Score Card (BSC) puts more stress on financial parameters than on non-financial parameters since its objectives is the growth of the organization.
- iv. The key factors of Theory of Constraints are contribution and profit.
- v. EVA encourages short term performance.

1x5

Answer to Qn.1(b):

- i. False.
- ii. False.
- iii. False.
- iv. False.
- v. False.

Qn. No. 1(c): Fill in the gap, with the proper/more appropriate word(s) given in the brackets, in each of the following sentences:

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Answer

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Qn. No. 1

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- i. PDCA refers to Plan, ———, Check, Act. (Decide/Do).
- ii. Optimized Production Technology known as "—————" is a management philosophy developed by Dr. Eliyahu Moshe Goldratt. (Theory of Constraints/Throughput)
- iii. One of the ten principles of Lean Supply Chain is to 'make your customers and suppliers your real '————'. (friends/partners).
- iv. The Break-Even Chart is—— because it gives a meaningful picture of a given set of cost-volume-profit relationship . (dynamic/ static).
- v. A good management control framework will enhance organizational adaptability, accelerate productivity and enhance————(competitiveness/profit). 1x5

Answer to Qn.1(c):

- i. Do
- ii. Theory of Constraints
- iii. Partners
- iv. Static
- v. Competitiveness

Qn. No. 1(d):

Distinguish between:

- i. Strategic Planning vs. Management Control.
- ii. Theory X vs. Theory Y.
- iii. Management Control vs. Operational Control.
- iv. Symbiotic Relationship vs. Synergistic Relationship.
- v. Management Style vs. Culture. 2x5

Answer to Qn.1(d):

(i.)

Strategic Planning	Management Control
Focuses on one aspect at a time complex creative and analytical	Focuses on the whole organization Less complex Administrative and persuasive.

(ii.)

Theory- X (Old classical Theory)	Theory-Y (Doughlas McGregor's Theory)
Highly autocratic Believes that man hates to work. One has to be hired/forced/fired to extract work.	Highly participative style Work will be like play/ sleep, provided congenial working environment is created Self control is many times more powerful than external control.

(iii.)

Management Control	Operational Control
Managerial personnel are involved Time horizon-Weeks/months/Years Administrative and persuasive.	Supervisory personnel are involved. Day to day Follow directions.

(iv.)

Symbiotic Relationship	Synergistic Relationship
Is one in which the connected systems cannot function alone. The symbiotic relationship between a parasite & a plant is unipolar. Eg. Relationship between production & sales sub-system is bi-polar.	adds substantially to the system's performance The cooperative action of semi-independent sub-systems taken together produces a total output greater than the sum of their outputs taken independently. Eg. $2+2=5$ and not 4.

(v.)

Management Style	Management Culture
It may be summarized as a continuum between highly autocratic and highly participative style. In India, Infosys is a typical example of a company practicing a democratic approach in management Management style is associated with individual managers.	It consists of shared values, beliefs and norms of organization. It facilitates cooperation and communication within the organization. Corporate culture is pervasive and is an organizational concept.

1+4

Qn. No-2(a): What is Internet? What are its advantages?

Answer to Qn.2 (a):

An Intranet is a private computer network that uses Internet protocols and network connectivity to securely share part of an organization's information or operations with its employees. Sometimes the term refers only to the most visible service, the internal website. Briefly, an Intranet can be understood as a "private version of an Internet" or as a version of the Internet confined to an organization. Through devices and systems, off-site employees can access company information, computing resources and internal communications.

Advantages of Intranets:

- Intranets can help users to locate and view information faster and use applications relevant to their roles and responsibilities.
- With Intranets, organizations can make more information available to employees on a "pull" basis rather than being deluged indiscriminately by e-mails.

- Intranets can serve as a powerful tool for communication within an organization, vertically and horizontally.
- Intranets are also being used as a platform for developing and deploying applications to support business operations and decisions across the internet-worked enterprise.
- Cost-effective users can view information and data via web-browser.
- Intranets promote common corporate culture. It enhances collaboration-with information easily available by all authorized users, thereby enabling team-work.

Qn. No.-2(b): What is lean manufacturing? Briefly describe the lean system. Explain how adoption of lean manufacturing affects the profitability of an organization. 2+5+3

Answer to Qn.2 (b):

Lean manufacturing: Lean manufacturing is a philosophy of producing and delivering finished goods just-in-time to be sold, sub assemblies 'just-in-time' to be assembled into finished goods, fabricated parts 'just-in-time' to go into sub assemblies and purchased materials 'just-in-time' to be transformed into fabricated parts. This philosophy was first developed in Japan in the 50's.

Lean manufacturing Systems:

The overriding feature of Lean manufacturing is that materials or parts are generated in the exact quantity required and just at the time they are needed. A classic Lean manufacturing System consists of a series of manufacturing units, each delivering to one another in successive stages of production. The amount delivered by each unit to the next unit is exactly what the needs are for the next production period. There are no safety margins in the form of buffer stock or work-in-progress.

Lean manufacturing is thus a sophisticated approach, in eliminating wastage in the process of manufacturing in different stages, say, from the production design stage to the stage of delivery of finished product. Lean manufacturing is sometimes regarded as an inventory control technique or a purchasing method. It aims at eliminating all activities, which do not add 'value' to the product.

Lean manufacturing seeks to achieve the following goals:

- Elimination of non-value added activities
- Zero inventory
- Zero defects
- Zero Breakdowns
- 100% on time delivery service.

Adoption of Lean manufacturing affects the profitability in an organization:

Adoption of Lean manufacturing affects the profitability in an organization in the following ways:

- There will be a reduction in inventory holding costs since inventories of raw materials and finished goods will be eliminated.

6 ♦ Suggested Answers To Questions — MAEPM

- There will probably an increase in the price paid for raw-materials to compensate the supplier for the additional flexibility that they are required to offer.
- There may be cost increase as a result of peaks and troughs of demand, which cause fluctuating production levels and results in high labour costs through overtime.
- More management time may be spent on planning the resource utilization rather than on making strategic decisions to improve the profitability.

Qn.no.-3(a): In Organic Chemicals Ltd., the old boiler equipment is about to be replaced either by a coal-fired system or by an oil-fired system. Finance costs 15% a year and the other estimated costs are as follows:

	Rs. '000	
	Coal	Oil
Initial cost of boiler	70	100
Annual operating costs	60 p.a.	45 p.a.

If the company expected the new boiler system to last at least for 15 years, which system should be chosen? 5

Answer to Qn.3 (a):

On the basis of initial cost only, the company would choose Coal. But Coal's lifetime costs are much higher than Oil's, as we can see when we include the discounted annual operating costs of each system:

	Rs. In '000.	
	Coal	Oil
Initial cost of boiler	70	100
Annual operating costs *	351	261
Total Life Cycle Costs	421	363

*Annual operating costs x 5.847 (being annuity at 15%)

On this basis, oil is clearly much cheaper than coal. Unless there are other overriding considerations favouring coal, Oil-fired boiler should be chosen.

Qn.no.-3(b): Even Keel Ltd. manufactures and sells a single product X whose price is Rs. 40 per unit and the variable cost is Rs. 16 per unit.

- If the fixed costs for this year are Rs. 4, 80,000 and the annual sales are at 60% margin of safety, calculate the rate of net return on sales, assuming an income tax level of 40%.
- For the next year, it is proposed to add another product line Y whose selling price would be Rs. 50 per unit and the variable cost of Rs.10 per unit. The total fixed costs are estimated at Rs. 6, 66,600. The sales mix of X:Y would be 7:3. At what level of sales next year, would Even Keel Ltd., break-even? Give separately for both X and Y the break-even sales in Rupees and quantities. 10

Answer to Qn.3 (b):

- Statement showing computation of profit on X:

$$SP = 40$$

$$VC = 16$$

$$C = 24$$

$$P/V \text{ ratio} = C/S \times 100 = 24/40 \times 100 = 60\%$$

$$BES = FC/P/V \text{ ratio} = 4,80,000/60\% = \text{Rs. } 8,00,000$$

Let x be the total sales.

$$0.6x = x - 8,00,000 \text{ or } x = 20,00,000$$

$$\text{No. of units} = x/40 = 50,000.$$

> Sales	$(50,000 \times 40) = 20,00,000$
> Variable Cost	$= 8,00,000$
> Contribution	$= 12,00,000$
> Fixed Cost	$= 4,50,000$
> Profit	$= 7,20,000$
> Tax	$(7,20,000 \times 40\%) = 2,88,000$
> Net Profit	$= 4,32,000$

(ii.) Let the break-even units of products X and Y be $7a$ & $3a$ respectively.

In order to break-even, the contribution must be equal to FC:

$$(7a \times 24) + (3a \times 40) = 6,66,600.$$

$$A = 2314.58.$$

$$BES \text{ of } X = 7a = 16202.08 \times SP = 6,48,080$$

$$Y = 3a = 6943.75 \times SP = 3,47,187.$$

Qn.no.-4(a):

"Purpose of Sensitivity Analysis is to identify the critical variable in the present analysis." –Discuss.

5

Answer to Qn.4 (a):

Sensitivity Analysis:

In management accounting parlance, all quantitative and financial figures are best estimates, made on the basis of experience and of the study of macro-economic factors and industry-specific matters. In actual practice, while executing the project, all factors are subject to variation.

Sensitivity Analysis is one of the objective methods to ascertain the impact on final probability by taking specific changes in each critical factor variable. Thus if a company is to operate in a highly competitive market, with many rivals, sales volume and price will be critical variables and hence, one would like to assess how sensitive the project is to changes in sales volume and price.

Sensitivity Analysis, when applied to a capital project, will allow the margin of error in various parameters of a project which can be allowed before the project ceases to be profitable. Sensitivity Analysis does not directly measure risk and it is limited by being able to examine the effect of a change in one variable while the others, remaining constant, are unlikely occurrence in practice.

Qn. No. -4(b): X Ltd., is sensitive to changes in the levels of plant value, running cost and saving of a project. It is considering a project with the following cash flows:

Year	Purchase of Plant	Running cost	Savings
0	Rs. 7,000	Rs.	Rs.
1		2,000	6,000
2		2,500	7,000

The cost of capital is 8%. Measure the sensitivity of the project to changes in the levels of plant value. Running costs and savings (considering each factor at a time) such that Net Present value becomes zero. The present value factors at 8% are as follows:

Year	Factor
0	1.00
1	0.93
2	0.86

10

Answer to Qn.4 (b):

Present value of cash flows:

Year	Discount factor at 8%	PV of Plant cost	PV of running cost	PV of saving	NPV
0	1.00	(Rs. 7000)	-	-	(Rs. 7000)
1	0.93		(Rs. 1860)	Rs. 5580	Rs. 3720
2	0.86		(Rs. 2150)	Rs. 6020	Rs. 3870
		(Rs. 7000)	(Rs. 4010)	Rs. 11600	NPV 590

The project has positive NPV and therefore may be accepted. The changes in cash flows which would need to occur before the project just breaks-even (NPV=0).

Sensitivity Analysis (Variation of PV of Rs.590)

- The plant cost would need to increase by $(Rs.590/7000) \times 100 = 8.4\%$.
- The running cost would need to increase by $(Rs.590/4010) \times 100 = 14.7\%$.
- Savings will fall short by $(Rs.590/11600) \times 100 = 5.1\%$.

Savings is therefore more sensitive to affect the accountability of the project.

Qn. No. 5(a): What do you mean by "Balanced Score Card"?

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Answer to Qn.5 (a):

Balance Scorecard: Balanced Score Card is a performance management and strategy development methodology that helps executives translate an organization's mission statement and overall business strategy into specific, qualifiable goals and monitors the organization's performance in terms of these goals.

Balanced Score Card also aligns budgets to strategy and helps in developing an enterprise performance management system. Balanced Score Card is a set of financial and non-financial measures relating to company's critical success factors.

As a management tool, Balanced Score Card helps companies to assess overall performance, improve operational processes and enable management to develop better plans for improvements. It offers managers a balanced view of their organization upon which they can base real change.

Balanced Score Card has the following four perspectives:

- **Customer Perspective:**
To achieve the company's vision and strategy, how should the company appear to its customers?
- **Internal business performance:**
To satisfy shareholders and customers, what business processes must the company excel?
- **Learning and growth perspective:**
To achieve the vision, how will the company sustain its ability to change and improve?
- **Financial perspective:**
To succeed financially, how should the company appear to the company's shareholders?

Qn.no-5(b): Division K is a profit centre which produces three products L,M &N. Each product has an external market:

Products	L	M	N
External Market price per unit (Rs.)	48	46	40
Variable Cost of production in Division K (Rs.)	33	24	28
Labour Hours required per unit in Division K	3	4	2

Product M can be transferred to J but the maximum quantity that might be required for transfer is 300 units of M.

Products	L	M	N
The maximum External Sales are (units)	800	500	300

Instead of receiving transfers of Product M from Division K, Division J could buy similar product in the open market at a slightly cheaper price of Rs.45 per unit.

What should the transfer price for each units of M, If the total labour hours available in Division K are:

- i. 3,800 hours;
- ii. 5,000 hours.

5+5

Answer to Qn.5 (b):Computation of Contribution per labour hour from external sales:

Products	L	M	N
External Market Price per unit (Rs.)	48	46	40
Variable Cost of Production In Division K (Rs.)	33	24	28
Contribution (Rs.)	15	22	12
Labour Hours required per unit In Division K	3	4	2
Contribution per Labour Hour(Rs.)	5	5.50	6
Ranking	III	II	I

Computation of Transfer Price when the capacity is 3800 hours:Hours required for N = 300×2 = 600Hours required for M = 500×4 = 2000
2600Hours required for L = 800×3 = 2400
5000

The existing capacity is not sufficient to produce the units to meet the external sales. In order to transfer 300 units of M, 1200 hours are required in which division K will give up the production of L to this extent:

Variable Cost of M	Rs. 24
(+) Contribution lost by giving up the production of L to the extent of 1200 hours = $1200 \times 5 = 6000$	
Opportunity Cost per unit	Rs. 20
Required Transfer Price	Rs. 44

Computation of Transfer Price when the capacity is 5600 hours:

Variable Cost of M	Rs. 24
(+) Contribution lost by giving up the production of L to the extent of 600 hours = $600 \times 5 = 3000$	
Opportunity Cost per unit	Rs. 10
Required Transfer Price	Rs. 34

Qn.no.-6(a): What do you mean by the 'Cause-Effect Diagram'?

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Answer to Qn.6(a):

The Cause-Effect Diagram is one of the powerful tools for quality control. It is also called a "Fishbone Diagram", because of its shape. This diagram was originated by a Japanese Kaoro Ishikawa, who first used it in 1943.

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Qn.no.-6(b):
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The Cause-Effect Diagram is used to identify and structure the causes of a given effect.

When to use Cause-Effect Diagram:

- Use it when investigating a problem, to identify and select key problem causes to investigate or address;
- Use it when the primary symptom (or effect) of a problem is known but possible causes are not clear.
- Use it when working in a group, to gain a common understanding of problem causes and their relationship;
- Use it to find other causal relationships, such as potential risks or causes of desired effects.
- Use it in preference to a Relations Diagram where there is one problem and causes are mostly hierarchical.

Understanding the Cause-Effect Diagram:

Solutions to problems are often not easy to find and those at first appear to be obvious may address only the symptoms rather than the true cause of the problem. Identifying causes as an intermediate step makes solutions both easier to find and also more likely to address the problem fully.

Causes tend to appear in chains, where one cause is caused by another and so on. Eg., an accident may be caused by a puncture, which is caused by imperfections in the road, nails on the road, etc., One cause may also be caused by a combination of other causes. Eg., Rough Road, Weak tyres, Sudden breaking, etc.,

Qn.no.-6(b): S.Ltd is engaged in manufacturing activities. It has received a request from one of its important customers to supply a product which will require conversion of Material M, which is a non-moving item.

The following details are available:

Book Value of Material M	Rs. 60
Realizable Value of Material M	Rs. 80
Replacement Cost of Material M	Rs. 100

It is estimated that conversion of one unit of M into one unit of finished product will require one unit of labour hour. At present labour is paid @Rs. 20 per hour.
Other costs are as follows:

Out of pocket expenses	Rs. 30 per unit.
Allocated overheads	Rs. 10 per unit.

The labour will be re-deployed from other activities. It is estimated that the temporary redeployment will not result in loss of contribution. The employees to be redeployed are permanent employees of the company.

Estimate the minimum price to be charged from the customer so that the company is not worse-off by executing the order.

Answer to Qn.6(b):

Statement showing minimum price to be charged based on relevant cost:

Particulars	Nature and computation	Rs.
Material M	Slow moving material. Realizable value is relevant as opportunity cost	Nil
Labour cost	The workers are permanent employees. Assuming that there is no retrenchment Policy existing, committed costs are not relevant	80.00
Out of pocket Expenses	Specially incurred. Hence relevant.	30.00
Allocated overhead	Allocations are not specifically incurred. Hence irrelevant.	Nil
	Minimum price to be charged	110.00

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Qn. No.-7(a): What is a Decision Tree?**Answer to Qn.7(a):**

Decision Tree: Decision Tree is a tool which helps to choose between several courses of action. Decision Tree diagram is a graphical representation of various alternatives and the sequence of events in a decision problem. It provides a highly effective structure within which options can be laid out and the possible outcomes of choosing those options can be investigated. It also helps to form a balanced picture of the risks and rewards associated with each possible course of action.

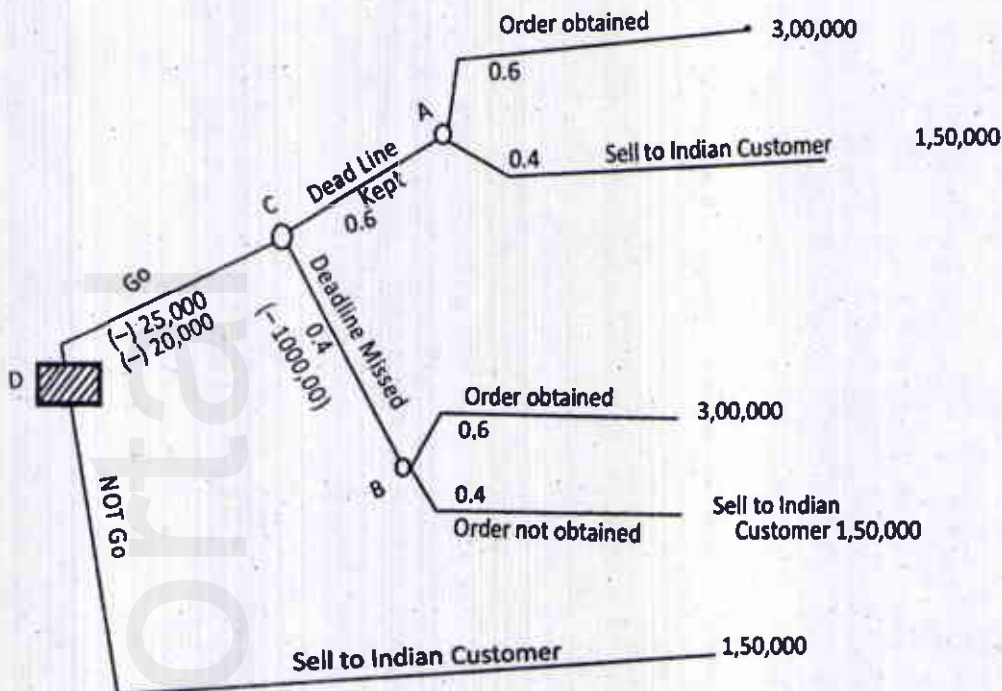
In constructing a decision tree, there are certain conventions to be followed. The tree is constructed starting from left and moving towards right. The technique of analyzing a decision tree is called 'Roll-back-technique'.

Qn.no-7(b): Mr. X is trying to decide whether to travel to Sri Lanka from Delhi to negotiate the sale of a shipment of China novelties. He holds the novelties in stock and is fairly confident but by no means sure that if he makes the trip, he will sell the novelties at a price that will give him a profit of Rs. 3, 00,000. He puts the probability of obtaining the order at 0.6. If he does not make the trip, he will certainly not get the order.

If the novelties are not sold in Sri Lanka, there is an Indian Customer, who will certainly buy them at a price that leaves him a profit of Rs. 1, 50,000 and his offer will be open at least till Mr. X returns from Sri Lanka. Mr. X estimates the expenses of trip to Sri Lanka at Rs. 25,000. He is however, is concerned that his absence, even for only three days, may lead to production inefficiencies in the factory. These could cause him to miss the dead-line on a contract, with the consequences that a late penalty of Rs. 1, 00,000 will be invoked. Mr. X assesses the probability of missing the deadline under these circumstances at 0.4. Further, he believes that in his absence, there will be a lower standard of house-keeping in the factory and the raw material and labour costs on the other contract will rise by about Rs. 20,000 above the budgeted figure. Draw an appropriate decision tree for Mr. X's problem and using the Expected Monetary Value (EMV) as the appropriate criterion for decision and find the appropriate initial decision.

10

Answer to Qn.7(b):



By following Roll-back technique

At A, $EMV = 3,00,000 \times 0.6 + 1,50,000 \times 0.4 = 1,80,000 + 60,000 = 2,40,000$ At B, $EMV = 3,00,000 \times 0.6 + 1,50,000 \times 0.4 = 1,80,000 + 60,000 = 2,40,000$ At C, $EMV = 2,40,000 \times 0.6 + 2,40,000 \times 0.4 - 1,00,000 \times 0.4$
 $= 1,44,000 + 96,000 - 40,000 = 2,00,000$ A+D Go $2,00,000 - (25,000 + 20,000) = 2,00,000 - 45,000 = 1,55,000$ A+D Not Go 1,50,000

Hence X should proceed to Sri Lanka, as the EMV will be Rs. 1.55,000 if he goes, as against the EMV of Rs. 1,50,000 if he does not go.

Qn. No.-8: Write Short notes on any three out of the following:

- (i.) Target costing;
- (ii.) Quality Circle-A way to quality improvement;
- (iii.) Enterprise Risk Management (ERM);
- (iv.) Supply Chain Management

3x5

Answer to Qn.8(i):

Target Costing: Target costing is a philosophy in which product development is based on what the customer wants and is willing to pay for not what it costs to produce. Hence start with the market determined price; then the desired profit margin; and work back the target cost. Peter Drucker calls this "price-led costing".

Target cost = Target Price - Target Profit and not Cost + Profit = Selling Price.

"Target Cost Management is a management technology using scientific principles and technologies to establish a cost target, break-down the cost target and improve cost. It adopts these technologies through the development and design phases in order to achieve product specification cost within the cost target that are included in life-cycle cost; development design, manufacturing, distribution, sales, usage and disposal costs."

Target Costing is a structured approach for determining the cost at which a product with a specific functionality and quality must be produced to generate the desired level of profitability.

Features of Target Cost Management:

- Cost planning is done in the design and development stage itself, where the impact will be significant, since normally 80% of costs are committed before production starts.
- Cross-functional team fosters fruitful teamwork.
- External information is built into the system, along with internal information.
- Cost awareness is created throughout the organization.
- It is not just a cost accounting technique but a strategic cost management philosophy that focuses on the core of the operation of an organization.

Answer to Qn.8(ii):

Quality Circle-A way to quality improvement :

Quality Circle: Quality Circle is a small group of 6 to 12 employees doing similar work, who voluntarily meet together on a regular basis to identify improvements in their respective work areas using proven techniques for analyzing and solving work related problems coming in the way of achieving and sustaining excellence leading to mutual upliftment of employees as well the organization. It is "a way of capturing the creative and innovative power that lies within the work-place."

Quality Circle is a people-building philosophy, providing self-motivation and happiness in improving environment without any compulsion or monetary benefits.

Quality Circle-A way to quality improvement:

Quality Circle represents a philosophy of managing people—especially those at the grass-root level as well

as a clearly defined mechanism and methodology for translating this philosophy into practice and a required structure to make it a way of life. It is bound to succeed where people are respected and are involved in decisions, concerning their work-life and in environments where peoples' capabilities are looked upon as assets to solve work-area problems.

The Quality Circle philosophy calls for a progressive attitude on the part of the management and their willingness to make adjustments, if necessary, in their style and culture. If workers are prepared to contribute their ideas, the management must be willing to create a congenial environment to encourage them to do so. It is based upon the human resource management-considered as one of the key factors in the improvement of product quality & productivity.

A variety of benefits have been attributed to Quality Circles, including higher quality, improved productivity, job-enrichment and greater team-work.

Answer to Qn.8(iii):

Enterprise Risk Management:

Enterprise Risk Management (ERM) is an organization-wide approach that seeks to implement risk awareness prevention programme throughout a company, thus creating a corporate culture able to handle the risks associated with a rapidly changing business environment. Practitioners of ERM incorporate risk management into basic goals and values of the company and support those values with action. They conduct risk analysis, devise specific strategies to reduce risk, develop monitoring systems to warn about potential risks and perform regular reviews of the programme.

ERM is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity and manage risk to be within its risk appetite and to provide reasonable assurance regarding the achievement of entity objectives.

ERM encompasses the following:

- Aligning risk appetite and strategy
- Enhancing risk response decisions.
- Reducing operational surprises and losses.
- Identifying and managing multiple and cross-enterprise risks.
- Seizing opportunities and
- Improving deployment of capital.

Answer to Qn.8(iv):

Supply Chain Management: Supply Chain Management encompasses the planning and management of all activities involved in sourcing, procurement, conversion and logistics activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies.

The concept of Supply Chain, with its emphasis on linkages among all of the value-adding activities in the chain, did not emerge until the early 1990s. Since then, Supply Chain and Supply Chain Management have become pervasive terms in the business world. Why overwhelming attention is being paid to Supply Chain Management is due to the fact that effective management of the Supply Chain Management can help boost a firm's performance.

Supply Chain Management can provide a distinctive and sustainable competitive advantage and improved profitability.

Five Basic Components of Supply Chain Management:

The Five Basic Components of Supply Chain Management are:

- Planning
- Sourcing and suppliers
- Manufacturing
- Delivering and
- Receiving the defectives and excess products back from customers.

Supply Chain Management continues to evolve at a very rapid rate for the manufacturers. The most important overall development is the movement away from "interfacing" with customers and suppliers and towards "integrating" with customers and suppliers. This represents a fundamental shift in the way manufacturers transact business. The very foundations on which companies managed demand and supply business relationships is rapidly disappearing in favour of more effective of Supply Chain Management methods. Of course, good product, quality and price will always be important but the added requirements to respond rapidly to customer requests and deliver flawlessly in meeting commitments has had profound effects on how manufacturers perceive and manage their entire supply chains.